

REMARKS

Claims 3-5, 17, and 25-30 are now pending in the application. By this paper, Claim 26 has been amended and Claims 27-30 have been added. Support for the foregoing amendments and new claims can be found throughout the specification, claims, and drawings originally filed. No new matter has been added. The preceding amendments and the following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 25, 26, 3-5, and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Renn (WO 00/23825). This rejection is respectfully traversed.

Independent Claim 25 recites a liquid drop discharge device including a substrate and a plurality of discharge heads supported above the substrate. Each of the discharge heads includes a nozzle and selectively discharges liquid drops through the nozzle to the substrate. The liquid drops from each of the discharge heads include a predetermined trajectory from each of the nozzles to the substrate. A plurality of laser devices are each supported proximate one of the discharge heads and each has a plurality of lenses surrounding the nozzle of one of the discharge heads. Each of the laser devices emits a plurality of light beams surrounding the predetermined trajectory of the liquid drops from one of the discharge heads. The light beams provide a light

energy to the liquid drops when the liquid drops divert from the predetermined trajectories.

Independent Claim 26 recites a liquid discharge device including a stage and a substrate supported on the stage, whereby the stage and the substrate are capable of transmitting light. A discharge head is disposed so as to face the substrate and selectively discharges liquid drops to the substrate. The liquid drops include a predetermined trajectory from the discharge head to the substrate. A head unit is disposed so as to face the stage opposite the discharge head and includes a laser device emitting a plurality of light beams through the stage and the substrate. The light beams are spaced apart from and surround the predetermined trajectory of the liquid drops and extend in the same direction as the liquid droplets discharged from the discharge head. The light beams provide light energy to the liquid drops when the liquid drops divert from the predetermined trajectory. The head unit further includes a collimator and a defracting element disposed between the laser device and the stage so that the light beams pass therethrough.

Applicants respectfully submit that the cited art of record fails to disclose a liquid drop discharge device including a plurality of lenses that surround a nozzle of a discharge head such that light beams emitted from the laser devices surround a predetermined trajectory of liquid drops discharged from the nozzle of the discharge head.

Renn discloses a nebulizer (54) that generates an aerosol mist (62) containing aerosol particles (52) that are forced into a hollow-core fiber (50) by a laser beam (46) received through a lens (64). See Renn at Page 9, Ins. 7-12, and Figure 4. While the

lens (64) is schematically shown as being proximate to an outlet of the nebulizer (54), Applicants respectfully submit that the lens (64) does not *surround* a nozzle of the nebulizer (54) and that only a single lens (64) is disclosed. See Renn at Figure 4.

Applicants further submit that Renn fails to disclose a plurality of light beams that *surround* a predetermined trajectory of liquid drops discharged from a discharge head. As shown in Figure 4 of Renn, the laser light (46) does not *surround* the aerosol particles (52) of the aerosol mist (64) discharged from the nebulizer (54). Rather, the laser light (46) of Renn engages and confines the aerosol particles (52) to direct the aerosol particles (52) into a fiber entrance (56) of the hollow-core fiber (50). See Renn at Figure 4. Because Renn discloses a laser light (46) that engages and confines aerosol particles (52) to direct the aerosol particles (52) into the hollow-core fiber (50), Applicants respectfully submit that the laser light (46) of Renn does not “surround” the liquid drops such that light energy is only provided to the liquid drops when the liquid drops divert from a predetermined trajectory.

With regard to independent Claim 26, Applicants respectfully submit that Renn fails to disclose light beams that are spaced apart from a predetermined trajectory and extend in the same direction as liquid drops discharged from a discharge head, as the laser light (46) of Renn engages and confines the aerosol particles (52), and discharge of such aerosol particles (52) is transverse to the direction of the laser light (46). See Renn at Figure 4.

In light of the foregoing, Applicants respectfully submit that independent Claims 25 and 26, as well as Claims 3-5 and 17, respectively dependent therefrom, are in

condition for allowance. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

NEW CLAIMS


New Claims 27-30 are added for consideration. Because new Claims 27-30 respectively depend from independent Claims 25 and 26, which are believed to be in condition for allowance in light of the foregoing remarks, Applicants respectfully submit that new Claims 27-30 are similarly in condition for allowance.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: July 18, 2007

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